

- 6 Ossip-Klein DJ, Giovino GA, Megahed N, *et al.* Effects of a smokers' hotline: results of a 10-country self-help trial. *J Consult Clin Psychol* 1991;**59**:325-32.
- 7 Jaen CR, Cummings KM, Zielezny M, *et al.* Patterns and predictors of smoking cessation among users of a telephone hotline. *Public Health Report* 1993;**108**:772-8.
- 8 Platt S, Tannahill A, Watson J, *et al.* Effectiveness of antismoking telephone helpline: follow up survey. *BMJ* 1997;**314**:1371-5.
- 9 Owen L. Impact of telephone helpline for smokers who called during a mass media campaign. *Tobacco Control* 2000;**9**:148-54.
- 10 Borland R. Three-month follow up on callers to a telephone counselling service in 1987. In: *Quit Evaluation Studies, 1989: Volume 3, Chapter 6*, www.quit.org.au [Accessed 10 June 2003].
- 11 Wakefield M, Miller C. Evaluation of the national quitline service. In: Hassard K, eds. *Australia's national tobacco campaign: evaluation report, Vol. 1*. Canberra: Commonwealth Department of Health and Aged Care, 1999:83-106.
- 12 Public Health Service. Clinical practice guideline: Treating tobacco use and dependence. US Department of Health and Human Services, Rockville, Maryland, USA June 2000 (ISBN 1-58763 007 9).
- 13 Zhu SH, Anderson CM, Johnson CE, *et al.* A centralised telephone service for tobacco cessation: the California experience. *Tobacco Control* 2000;**9**(suppl II):ii48-55.
- 14 Wakefield M, Borland R. Saved by the bell: the role of telephone helpline services in the context of mass-media anti-smoking campaigns. *Tobacco Control* 2000;**9**:117-19.
- 15 Census and Statistics Department. *Special Topics Report No. 20. General Household Survey 1998*. Hong Kong: Government Printer, 2000.
- 16 Prochaska JO, Goldstein MG. Process of smoking cessation: implication for clinicians. *Clin Chest Med* 1991;**12**:727-35.
- 17 Heatherton TF, Kozlowski LT, Frecker RC, *et al.* The Fagerstrom test for nicotine dependence: a revision of the Fagerstrom tolerance questionnaire. *Br J Addict* 1991;**86**:1119-27.
- 18 Census and Statistics Department. *Report No. 5. Thematic Household Survey 2000*. Hong Kong: Government Printer, 2000.
- 19 Prout MN, Martinez O, Ballas J, *et al.* Who uses the smoker's quitline in Massachusetts? *Tobacco Control* 2002;**11**(suppl II):ii74-5.
- 20 Fagerstrom KO, Schneider N. Measuring nicotine dependence: a review of the Fagerstrom tolerance questionnaire. *J Behav Med* 1989;**12**:159-82.
- 21 Silagy C, Lancaster T, Stead L, *et al.* Nicotine replacement therapy for smoking cessation. *Cochrane Database Syst Rev* 2002;**20**:CD000146.
- 22 Davis SW, Cummings KM, Rimer BK, *et al.* The impact of tailored self-help smoking cessation guides on young mothers. *Health Educ Q* 1992;**19**:495-504.
- 23 Orleans CT, Boyd NR, Bingle R, *et al.* A self-help intervention for African American smokers: tailoring cancer information service counselling for a special population. *Prev Med* 1998;**27**:S61-70.
- 24 Thompson B, Kinne S, Lewis FM, *et al.* Randomized telephone smoking-intervention trial initially directed at blue-collar workers. *J Natl Cancer Inst Monogr* 1993;**14**:105-12.
- 25 Balanda KP, Lowe JB, O'Connor-Fleming ML. Comparison of two self-help smoking cessation booklets. *Tobacco Control* 1999;**8**:57-61.
- 26 Hughes JR, Goldstein MG, Hurt RD, *et al.* Recent advances in the pharmacotherapy of smoking. *JAMA* 1999;**281**:72-6.
- 27 Riemersma RP, Pattenden J, Bridle C, *et al.* Systematic review of the effectiveness of stage based interventions to promote smoking cessation. *BMJ* 2003;**326**:1175-7.
- 28 Velicer WF, Prochaska JO, Rossi JS, *et al.* Assessing outcome in smoking cessation studies. *Psychol Bull* 1992;**111**:23-41.
- 29 Gourlay SG, Benowitz NL, Forbes A, *et al.* Determinants of plasma concentrations of nicotine and cotinine during cigarette smoking and transdermal nicotine treatment. *Eur J Clin Pharmacol* 1997;**51**:407-14.

ECHO

How much downside? Quantifying the relative harm from tobacco taxation

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Objective: To estimate the loss of life expectancy attributable to tobacco taxation (via financial hardship and flow-on health effect) in New Zealand.

Design: Data were used on the gradients in life expectancy and smoking by neighbourhood socioeconomic deprivation and survey data on tobacco expenditure. Three estimates were modelled of the percentage of the crude association of neighbourhood deprivation with life expectancy that might be mediated via financial hardship: 100%, 50%, and 25% (best estimate). From this information the impact of tobacco taxation on life expectancy was estimated.

Main results: For the total population, the estimated loss of life expectancy due to tobacco tax ranged from 0.005 years to 0.027 years. For people living in the most deprived 30% of neighbourhoods, the range was 0.009 to 0.044 years (that is, 3 to 16 days of lost life expectancy). For the total population the loss of life expectancy attributable to tobacco tax ranged from 119 to 460 times less than that attributable to deprivation. The loss of life expectancy attributable to tobacco tax was 42 to 257 times less than that attributable to smoking.

Conclusions: The estimated harm to life expectancy from tobacco taxation (via financial hardship) is orders of magnitude smaller than the harm from smoking. Although the analyses involve a number of simplistic assumptions, this conclusion is likely to be robust. Policy makers should be reassured that tobacco taxation is likely to be achieving far more benefit than harm in the general population and in socioeconomically deprived populations.

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